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Establishment of *in vitro* multiple bud cultures and plant regeneration in *Phoenix dactylifera* L. cv Barhee

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Adventitious bud clusters of date palm cv Barhee were successfully established from juvenile leaves sampled from offshoots. An average 8.4 + 1.3 adventitious buds per juvenile leaf (< 1cm) was obtained using MS basal medium supplemented with reduced amounts of 2,4-D (0.2 mg/L). Explants bearing buds were transferred onto MS medium supplemented with 70 g/L sucrose in order to promote the proliferation of caulogenic culture able to generate multiple bud clusters. The promoting effect of temporary immersion on shoots proliferation was found to be significant when compared to cultivation on solid media. Indeed, multiplication rate increased from 2 to 3. Elongation of shoots was achieved using a thin-film of liquid medium deprived of PGRs. Further rooting was induced in liquid MS basal medium supplemented with 4 mg/L IBA. Twelve-month old vitroplants were physiologically able to withstand acclimatization. As a result, 75% of regenerated plants were successfully acclimatized. No phenotypic variation was observed among more than 500 adventitious bud-derived plants. All regenerants have survived after field transplantation.

Keywords:
Date palm, cv.Barhee, micropropagation, biotechnology.